



NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

[Docket No. PRM-50-124; NRC-2022-0178]

Licensing Safety Analysis for Loss-of-Coolant Accidents

AGENCY: Nuclear Regulatory Commission.

ACTION: Petition for rulemaking; notice of docketing and request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has received a petition for rulemaking from Ralph O. Meyer dated August 1, 2022, requesting that the NRC revise its regulations regarding the licensing safety analysis for loss-of-coolant accidents. The petition was docketed by the NRC on October 11, 2022, and has been assigned Docket No. PRM-50-124. The NRC is examining the issues raised in PRM-50-124 to determine whether they should be considered in rulemaking. The NRC is requesting public comment on this petition at this time.

DATES: Submit comments by **[INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods; however, the NRC encourages electronic comment submission through the **Federal rulemaking website**:

- **Federal rulemaking website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2022-0178. Address questions about NRC Dockets to Dawn Forder; telephone: 301-415-3407; email: Dawn.Forder@nrc.gov. For technical questions contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Email comments to:** Rulemaking.Comments@nrc.gov. If you do not receive an automatic email reply confirming receipt, then contact us at 301-415-1677.

- **Mail comments to:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Blake Purnell, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-1380, email: Blake.Purnell@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2022-0178 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2022-0178.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov.

- **NRC’s PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC’s PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

B. Submitting Comments

The NRC encourages electronic comment submission through the **Federal rulemaking website** (<https://www.regulations.gov>). Please include Docket ID NRC-2022-0178 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <https://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. The Petitioner and Petition

The petition for rulemaking (PRM) was filed by Ralph O. Meyer. The PRM requests that the NRC revise its regulations at part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), “Domestic Licensing of Production and Utilization Facilities,” regarding the licensing safety analysis for loss-of-coolant accidents (LOCAs). The PRM requests that the NRC amend its regulations at 10 CFR 50.46, “Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors,” which limits peak cladding temperature and maximum cladding oxidation to satisfy General Design Criterion No. 35 of appendix A to part 50, “Emergency core cooling.” The petition may be found in ADAMS at Accession No. ML22284A087.

III. Discussion of the Petition

The letter from the petitioner states that the NRC’s current rule “limits peak cladding temperature and maximum cladding oxidation” and “no longer ensures coolable

geometry at higher fuel burnups” and includes an analysis and discussion of a proposed alternative. The petitioner requests the NRC to conduct rulemaking to implement criteria in 10 CFR 50.46 that would limit the number of fuel rod ruptures to 10 percent for large break LOCAs and to 1 percent for small break LOCAs, in lieu of existing acceptance criteria in 10 CFR 50.46(b). The petitioner argues that current licensing safety analyses for LOCAs are no longer valid for fuel at moderate and higher burnups. According to the petitioner, the German regulatory agency uses these criteria.

IV. Conclusion

The NRC has determined that the petition meets the sufficiency requirements for docketing a PRM under 10 CFR 2.803, “Petition for rulemaking-NRC action.” The NRC will examine the issues raised in PRM-50-124 and any comments received in response to this comment request to determine whether these issues should be considered in rulemaking. The public can monitor further action on the rulemaking that will address this petition by searching Docket ID NRC-2022-0178 on the Federal rulemaking website, <https://www.regulations.gov>. The site allows members of the public to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (NRC-2022-0178); 2) click the “Subscribe” link; and 3) enter an email address and click on the “Subscribe” link. The NRC also tracks the status of all NRC rules and PRMs on its website at <https://www.nrc.gov/about-nrc/regulatory/rulemaking/rules-petitions.html>.

Dated November 17, 2022.

For the Nuclear Regulatory Commission.

Brooke P. Clark,

Secretary of the Commission.